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EXAMINER
DUNN, DARRIN D

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/693,655	KRANTZ ET AL.
	Examiner	Art Unit	
	DARRIN DUNN	2121	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>06/03/09</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,4,5,8-13,15-19,21-26,28-30,32,34-42 and 44-49* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4,5,8-13,15-19,21-26,28-30,32,34-42 and 44-49* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>06/03/09</u>.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1.   The Office Action is responsive to the communication filed on 06/03/2009.

2.   Claims 1-2, 4-5, 8-13, 15-19, 21-26, 28-30, 32, 34-40, 41-42, and 44-49 are pending.

Continued Examination Under 37 CFR 1.114

3.   A request for continued examination under 37 CFR 1.114, including the fee set forth in

37 CFR 1.17(e), was filed in this application after final rejection. Since this application is

eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e)

has been timely paid, the finality of the previous Office action has been withdrawn pursuant to

37 CFR 1.114. Applicant's submission filed on 06/03/2009 has been entered.

Information Disclosure Statement

3.   The information disclosure statement (IDS) submitted on 06/03/09 is in compliance with

the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being

considered by the examiner.

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person

> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

5.   The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459

(1966), that are applied for establishing a background for determining obviousness under 35

U.S.C. 103(a) are summarized as follows:

    1.   Determining the scope and contents of the prior art.
    2.   Ascertaining the differences between the prior art and the claims at issue.
    3.   Resolving the level of ordinary skill in the pertinent art.
    4.   Considering objective evidence present in the application indicating obviousness
            or nonobviousness.

6.   Claims 1-5, 8-14, 28-32, 34-40, and 45-47 rejected under 35 U.S.C. 103(a) as being

unpatentable over Melpignano et al. (USPN 2006/0084417 A1) in view of Shi (USPN 6807163),

and in further view over Nguyen (USPN 20030212784)

7.   As per claim 1, Melpignano et al. teaches a computing system supporting network

selection based upon network information spanning multiple communication media, the system

comprising:

    a rules data store ([0049], [FIG 3 – network interface 'if' class diagrams] e.g., rules data store

is interpreted as maintaining selection criteria) for maintaining network selection criteria ([0049-

52], [0035] e.g., location, context class, NetworkInterface class (priorities), user preferences,

speed, power consumption, mobility profiles, cached information, security, and connection costs)

acquired from a plurality of sources ([0039], [0049 – suitable main classes of NISP], [FIG 3 -

elements 200, 202, 210, 214] e.g., plurality of sources, not defined, may comprise multiple

sources including user preferences, predefined sets or personal policies, and/or classes

(AccessPoint, NetworkInterface, and Context) where each class represents a source of network

information pertinent to selecting an appropriate interface);

a media specific module interface ([0050] e.g., NetworkInterface class. It is interpreted that this class represents multiple interface types, such as Bluetooth, GPRS, WLAN (e.g., iftype, ifName, ifStatus) for providing accumulated network interface information ([Figure 3], [0050 – element 202] e.g., accumulate network interface information encompasses type, name, flags, physical characteristics per interface) potentially spanning multiple communication media (e.g., Bluetooth, Wlan, GPRS, etc) , the accumulated network interface information being associated with a set of networks (e.g., WLAN, WPAN, etc) and a set of network interfaces ([0033 lines 3-4], [Figure 3-ifType] e.g., interface cards), each network interface for connecting the computing system to a network in the set of networks (e.g., connectivity to server via network);

a rules engine ([0049-IfManager] e.g., the NicAgent role is implemented by the IfManager class) for designating one of the set of networks by applying a network selection criterion from the rules data store to the accumulated network interface information potentially spanning multiple media ([0053-55] e.g., IfManager takes care of interface connectivity, management, and selection being performed by choosing the best interface according to context and user preferences. Since the IfManager accesses context, i.e., Context class, the rules engine in effect utilizes one or more classes to select the optimal interface)

However, Melpignano et al. does not teach that the media specific module interface comprises a normalization module that standardizes communication requests it receives from the rules engine directed to the network interface. Nguyen teaches a network fault monitoring module ([0019], [0021], [0027] e.g., A normalization module, in light of applicant's specification, is interpreted as providing network status information. Applicant's specification teaches that the normalization module standardizes communication via providing status

information from the media specific modules to the rules engine. A standard request would be to ask for the status and get the status per interface type. It is standard and does not vary per interface type. Applicant does not define 'standardization' or what it entails other than a general description)

Therefore, at the time the invention was made, one of ordinary skill in the art would have motivation to provide a module to relay the status information from the NetworkInterface class to the rules engine. Melpignano et al. teaches that the rules engine (e.g., IfManager) continuously monitors the network interface availability. Since multiple interfaces are provided, it is beneficial to relay the status of each interface to the IfManager such that an appropriate interface may be selected. Since a network fault module, as taught by Nguyen, provides interface status information to other modules, it would have been obvious to include this module as part of the networkinterface class, which illustrates a standard, i.e., interpreted as an established form (e.g., request status and provide status) between the rules engine and network interface class.

Melpignano et al. teaches a scanning engine –([Figure 3-element 200 (ImScanning Type) associated with a network interface ([0055-56]) for adaptively controlling a scanning delay period ([0057] e.g., scanning at periodic intervals.), but does not disclose scanning based at least upon results of a previous scan. Shi teaches an adaptive rate channel scanning method for adaptively changing the scan rate based on data stored in a channel table during previous channels scanned by the channel scan process ([COL 4 lines 30-41)) (Note: Shi is also introduced to address applicant's specification regarding the scan rate and adapting)

Therefore, at the time the invention was made, one of ordinary skill in the art would have motivation to adaptively change the scan rate based on previous scan results to adapt to changing network conditions as a means to save battery power. Melpignano et al. teaches scanning for available access points at periodic intervals. Shi teaches changing the scanning rate based on previous scan results to conserve battery power. Since adaptively selecting a scan rate as a function of network conditions (as assessed via previous scan results) saves power, it would have been obvious to modify Melpignano et al. to adapt the scan rate based on previous scans.

7.   As per claim 2, Melpignano et al. teaches the computing system of claim 1 wherein the rules engine having has access to the rules data store ([FIG 3], [0054-56])

8.   As per claim 4, Melpignano et al. teaches the computing system of claim 3 further comprising a plurality of media specific modules ([0033] , [0050] e.g., interfaces/associated device drivers corresponding to WLAN, WPAN, Bluetooth, IEEE 802.11b, i.e., media specific interface modules. Page 15 line 7 of applicant's instant specification) configured to acquire network interface information ([0050] e.g., fStatus) pertaining to network interfaces associated with particular media types, and to receive network interface configuration commands (e.g., priority) , from the rules engine, to connect to one of the set of networks ([0053-56])

9.   As per claim 5, Melpignano et al. teaches the computing system of claim 4 wherein the media specific modules acquire network interface information from media specific drivers associated with particular network interfaces ([0049-50] e.g., it is understood that interface device drivers provide status, capability, and list of reachable access points of the interface card)

10.   As per claim 8, Melpignano et al. teaches the computing system of claim 1 wherein the network selection criterion specifies a preference order between at least two media based upon a network parameter associated with the media ([0050] e.g., fPriority)

11.   As per claim 9, Melpignano et al. teaches the computing system of claim 1 wherein the network selection criterion specifies a preference order between at least two media based upon a network type associated with the media ([0050] fType)

12.   As per claim 10, Melpignano et al. teaches the computing system of claim 1 wherein the network selection criterion specifies a preference order based upon a current location of the computing system ([0052-56] e.g., location is one criteria employed in selecting an interface)

13.   As per claim 11 Melpignano et al. teaches the computing system of claim 1 wherein the network selection criterion specifies a preference order between logical networks ([0050] fPriority)

14.   As per claim 12, Melpignano et al. teaches the computing system of claim 1 wherein the network selection criterion specifies a preference order based upon a network time of use parameter ([0051] e.g., 'already been visited')

15.   As per claim 13, Melpignano et al. teaches the computing system of claim 1 wherein the rules engine is incorporated into a state machine that cyclically scans a set of network interfaces for networks ([0056-57], [FIG 4]), applies the network selection criterion to a set of networks and interfaces to render a current network and interface selection ([0053-57]), and issues configuration instructions in accordance with the current network and interface selection ([0055-57])

16.   As per claim 14, Melpignano et al. teaches the computing system of claim 1 further

comprising a scanning engine associated with a network interface for controlling the timing of

scanning based upon previous scan results maintained in a scanning history ([0057], [0061] e.g.,

scanning at periodic intervals. A list, i.e., scan history, of access points is maintained)

17.   As per claim 28, Melpignano et al. teaches a computer-readable medium including

computer-executable instructions for facilitating selecting a network and interface combination,

to which a computing system will initiate a connection via the network interface, based upon

network information spanning multiple communication media, the computer-executable

instructions facilitating:

   accessing network selection criteria acquired from a plurality of sources ([0039], [0049 –

suitable main classes of NISP], [FIG 3 -elements 200, 202, 210, 214] e.g., plurality of sources,

not defined, may comprise multiple sources including user preferences, predefined sets or

personal policies, and/or classes (AccessPoint, NetworkInterface, and Context) where each class

represents a source of information pertinent to selecting an appropriate interface;

   accumulating network interface information ([0050 – element 202] e.g., plurality of interface

cards and associated, class information) potentially spanning multiple communication media

([0033] e.g., data, fax, video, or speech, Wlan, Bluethooth) associated with a set of networks

(e.g., WLAN, WPAN) and a set of network interfaces ([0033 lines 3-4]), each network interface

for connecting the computing system to a network in the set of networks (e.g., connectivity to

server via network),

   However, Melpignano et al. does not teach that the accumulating is facilitated by a

normalization module that standardizes communication between a set of media specific modules

and a rules engine.   Nguyen teaches a network fault monitoring module ([0019], [0021], [0027]

e.g., A normalization module, in light of applicant's specification, is interpreted as providing

network status information. Applicant's specification teaches that the normalization module

standardizes communication via providing status information from the media specific modules to

the rules engine)

Therefore, at the time the invention was made, one of ordinary skill in the art would have

motivation to provide a module to relay the status information from the NetworkInterface class

to the IfManager. Melpignano et al. teaches that the rules engine (e.g., IfManager) continuously

monitors the network interface availability. Since multiple interfaces are provided, it is

beneficial to accumulate and relay the status of each interface to the IfManager such that an

appropriate interface may be selected. Since a network fault module, as taught by Nguyen,

provides interface status information to other modules, it would have been obvious to include

this module as part of the networkinterface class as part of the standard communication between

the rules engine and network interface class;); and

designating, via the rules engine ([0049], [0055]), one of the set of networks and a network

interface from the set of network interfaces by applying a network selection criterion to the

network interface information potentially spanning multiple media ([0053-55] e.g., IfManager

takes care of interface connectivity, management, and selection being performed by choosing the

best interface according to context and user preferences)

18.   As per claim 29, Melpignano et al. teaches the computer-readable medium of claim 28

wherein the network selection criterion is accessed from a configurable rules data store ([0036]

e.g. NISP)

19.   As per claim 30, Melpignano et al. teaches the computer-readable medium of claim 28

wherein the computer-executable instructions further facilitate issuing network interface

configuration instructions in accordance with the designating step ([0054], [0070-72] e.g.,

connectivity, management, and selection implies that a selected card is configured accordingly.

For example, insertion/removal of a card entails a new configuration)

20.   As per claim 32, Melpignano et al. teaches the computer-readable medium of claim 31

further comprising computer- executable instructions for acquiring, by the media specific

modules, network interface information from the communication media drivers associated with

particular network interfaces ([0049-50] e.g., it is understood that interface device drivers

provide status, capability, and list of reachable access points for a respective interface)

21.   As per claim 34, Melpignano et al. teaches the computer-readable medium of claim 28

wherein the network selection criterion specifies a preference order between at least two media

based upon a network parameter associated with the media ([0050] e.g., physical characteristics)

22.   As per claim 35, Melpignano et al. teaches the computer-readable medium of claim 28

wherein the network selection criterion specifies a preference order between at least two media

based upon a network type associated with the media([0050] fType)

23.   As per claim 36, Melpignano et al. teaches the computer-readable medium of claim 28

wherein the network selection criterion specifies a preference order based upon a current location

of the computing system ([0052] e.g., location)

24.   As per claim 37, Melpignano et al. teaches the computer-readable medium of claim 28

wherein the network selection criterion specifies a preference order between logical networks

([0050] e.g. WLAN, WPAN)

25.   As per claim 38, Melpignano et al. teaches the computer-readable medium of claim 28

wherein the network selection criterion specifies a preference order based upon a network time

of use parameter ([0051] e.g., 'already been visited')

26.   As per claim 39, Melpignano et al. teaches the computer-readable medium of claim 28

wherein machine the computer-executable instructions comprises a rules engine for evaluating at

least one of the network selection criteria based on the accumulated network interface

information ([0053] e.g., IfManager), and further comprising computer-executable instructions

for cyclically performing, under the control of a state machine: scanning a set of network

interfaces for networks ([0057], [FIG 4]); applying, with the rules engine, the network selection

criterion to a set of networks and interfaces to render a current network and interface selection

([0054]); and issuing configuration instructions in accordance with the current network and

interface selection ([0054], [0070-72] e.g., connectivity, management, and selection implies that

a selected card is configured accordingly. For example, insertion/removal of a card entails a new

configuration)

27.   As per claim 45, Shi teaches the computing system of claim 1, wherein the scanning

engine increases the scanning delay period when the plurality of previous scans indicate there is

no change in state ([COL 2 lines 1-15], [COL 4 lines 55-60], [COL 4 lines 14-20] e.g., a state

change is viewed in comparison to the number of LBT channels. One state would be a

substantial number of LBT channels necessitating minimizing the scan rate. Another state would

be an indication that the user is in a cell overlap area requiring a higher scan rate)

28.   As per claim 46, Shi teaches the computing system of claim 1, wherein the scanning

engine performs a scan when the plurality of previous scans indicate movement of the computing

system ([COL 1 lines 65-67], [COL 4 lines 35-40])

29.   As per claim 47, Shi teaches the computing system of claim 46, wherein the scanning

engine determines the computing system is moving based on at least one of received signal

strength ([COL 53-65], [COL 6 lines 1-13] e.g., comparison on RSSI values during a handover,

i.e., movement) , retransmission counts, or frame error rates.)

30.   Claims 15-19, 21-27, and 41-42 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Melpignano et al. (USPN 2006/0084417 A1) in view over Babbar et al.

(USPN 2004/0116140 A1) and in view over Shi (USPN 6807163)

31.   As per claim 15, Melpignano et al. teaches a method for selecting a network and interface

combination, to which a computing system will initiate a connection via the network interface,

based upon network information spanning multiple communication media, the method

comprising:

    accessing a network selection criteria acquired from a plurality of sources ([0039], [0049 –

suitable main classes of NISP], [FIG 3 -elements 200, 202, 210, 214] e.g., plurality of sources,

not defined, may comprise multiple sources including user preferences, predefined sets or

personal policies, and/or classes (AccessPoint, NetworkInterface, and Context) where each class

represents a source of information pertinent to selecting an appropriate interface)

    accumulating network interface information ([0050 – element 202] e.g., plurality of interface

cards and associated, class information, further including status information) potentially

spanning multiple communication media ([0033] e.g., data, fax, video, or speech, and/or Wlan, bluestooth) , the accumulated network interface information being associated with a set of networks (e.g., WLAN, WPAN) and a set of network interfaces ([0033 lines 3-4]), each network interface for connecting the computing system to a network in the set of networks (e.g., connectivity to server via networks),

However, Melpignano et al. does not teach that the accumulating is facilitated by a normalization module that standardizes communication between a set of media specific modules and a rules engine.   Nguyen teaches a network fault monitoring module ([0019], [0021], [0027] e.g., A normalization module, in light of applicant's specification, is interpreted as providing network status information. Applicant's specification teaches that the normalization module standardizes communication via providing status information from the media specific modules to the rules engine)

Therefore, at the time the invention was made, one of ordinary skill in the art would have motivation to provide a module to relay the status information from the NetworkInterface class to the IfManager. Melpignano et al. teaches that the rules engine (e.g., IfManager) continuously monitors the network interface availability. Since multiple interfaces are provided, it is beneficial to accumulate and relay the status of each interface to the IfManager such that an appropriate interface may be selected. Since a network fault module, as taught by Nguyen, provides interface status information to other modules, it would have been obvious to include this module as part of the networkinterface class as part of the standard communication between the rules engine and network interface class; and

designating, via the rules engine ([0049], [0055]), one of the set of networks and a network

interface from the set of network interfaces by applying a network selection criterion to the

network interface information potentially spanning multiple media ([0053-55] e.g., IfManager

takes care of interface connectivity, management, and selection being performed by choosing the

best interface according to context and user preferences.)

    However, Melpignano et al. does not teach that network selection criteria is acquired from at

least one of a group policy service. Babbar et al. teaches a service level agreement ([0009] e.g.,

a group policy is interpreted as an agreement between at least two entities, the agreement

providing communication rules between the entities. A contract/agreement pertaining to service

provisioning is a group policy)

    Therefore, at the time the invention was made, one of ordinary skill in the art would have

motivation to provide a service level agreement as part of the network selection criteria. Babbar

et al. teaches that mobile users gain access to network services from a terminal. Service level

agreements provide enhanced access to services, including cost, reliability, priority, protection

from unauthorized access, and system throughput. Melpignano et al. teaches that network

selection may be based upon security, costs, data transfer speed, and cached context information.

In effect, because service level agreements illustrate additional selection criteria, it would have

been beneficial to acquire network selection criteria, as provided by the service level agreement,

as part of selecting an optimal network.

    Melpignano et al. teaches initiating network scanning ([0040], [0057], [FIGure 3-element

200 (ImScanning Type) for a designated one or more set of network interfaces ([0055-56])

based at least in part upon a scanning algorithm ([Figure 3-element 200, [0057]) that adaptively

changes a scanning frequency ([0057], [0074-75] e.g., scanning frequency is interpreted as how

often an entity is checked. Here, an access point may be scanned when a poll interval expires or
it can be awaked after a new access point wireless event). However, Melpignano et al. does not
disclose adjusting the frequency based on previous scan results. Shi teaches an adaptive rate
channel scanning method for adaptively changing the scan rate based on data stored in a channel
table during previous channels scanned by the channel scan process ([COL 4 lines 30-41) Note:
Shi is also introduced to address the narrow limitations of the applicant's specification regarding
the scan rate (should applicant further define 'adapting')

   Therefore, at the time the invention was made, one of ordinary skill in the art would have
motivation to adaptively change the scan rate based on previous scan results to adapt to changing
network conditions as a means to save battery power. Melpignano et al. teaches scanning for
available access points at periodic intervals. Shi teaches changing the scanning rate based on
previous scan results to conserve battery power. Since adaptively selecting a scan rate as a
function of network conditions (as assessed via previous scan results) saves power, it would have
been obvious to modify Melpignano et al. to adapt the scan rate based on previous scans.

32.   As per claim 16, Melpignano et al. teaches the method of claim 15 wherein the network
selection criterion is accessed from a configurable rules data store ([0039] e.g., user preferences
implies that a user may modify a policy)

33.   As per claim 17, Melpignano et al. teaches the method of claim 15 further comprising
issuing network interface configuration instructions in accordance with the designating step
([0039] lines 8-11])

34.   As per claim 18, Melpignano et al. teaches the method of claim 15 wherein the media

specific modules (e.g., Bluetooth, Wlan, etc) are each associated with at least one distinct type

of communication media driver ([0049] e.g., MWAL handles all drivers for each interface. It is

implied that there is a unique driver per module, i.e., Bluetooth, Wlan, GPRS, etc)

35.   As per claim 19, Melpignano et al. teaches the method of claim 18 further comprising

acquiring, by the media specific modules (e.g., interfaces), network interface information from

the communication media drivers associated with particular network interfaces ([0049-50] e.g., it

is understood that interface device drivers provide status, capability, and list of reachable access

points for a respective interface)

36.   As per claim 21, Melpignano et al. teaches the method of claim 15 wherein the network

selection criterion specifies a preference order between at least two media based upon a network

parameter associated with the media ([0050] fPriority, [0036] - NISP)

37.   As per claim 22, Melpignano et al. teaches the method of claim 15 wherein the network

selection criterion specifies a preference order between at least two media based upon a network

type associated with the media ([0050] fType)

38.   As per claim 23, Melpignano et al. teaches the method of claim 15 wherein the network

selection criterion specifies a preference order based upon a current location of the computing

system ([0052] e.g., location)

39.   As per claim 24, Melpignano et al. teaches the method of claim 15 wherein the network

selection criterion specifies a preference order between logical networks ([0033] e.g., WLAN,

PWAN], [0050] e.g., fPriority)

40.   As per claim 25, Melpignano et al. teaches the method of claim 15 wherein the network

selection criterion specifies a preference order based upon a network time of use parameter

([0051] e.g., 'already visited or not').

41.   As per claim 26, Melpignano et al. teaches the method of claim 15 wherein the

designating comprises evaluating in a rules engine at least one of the network selection criteria

based on the accumulated network interface information ([0053-56]), and the method further

comprises cyclically performing, under the control of a state machine: scanning a set of network

interfaces for networks ([0057], [FIG 4]); applying, with the rules engine, the network selection

criterion to a set of networks and interfaces to render a current network and interface selection

([0054]); and issuing configuration instructions in accordance with the current network and

interface selection ([0054], [0070-72] e.g., connectivity, management, and selection implies that

a selected card is configured accordingly. For example, insertion/removal of a card entails a new

configuration)

42.   As per claim 27, Melpignano et al. teaches the method of claim 15 further comprising

initiating network scanning for a designated one or more of the set of network interfaces based at

least in part upon a scanning algorithm ([FIG 3-element 200, ScanningType) and previous scan

results maintained in a scanning history ([0056-57], [0074-76] e.g., lists of AccessPoints, i.e.,

history)

43.   As per claim 41, Melpignano et al, as modified, teaches wherein the rules data store

maintains network selection criteria from a plurality of sources ([0039-GUI]) and a group policy

service (e.g., supra discussion on claim 15 pertaining to service level agreements)

44.   As per claim 42, Babbar et al. teaches the computing system of claim 41 wherein the sources network selection criteria are acquired from include a provisioning service ([0009- Quality of Service provisions relating to the delivery of services and content as part of the service level agreement)

45.   As per claim 44, Babbar et al. teaches the method of claim 28 wherein the plurality of sources of the network selection criteria are acquired from include a provisioning service ([0009- ([0009- Quality of Service provisions relating to the delivery of services and content as part of the service level agreement)

46.   Claim 48 is rejected under 35 U.S.C. 103(a) as being unpatentable over Melpignano et al. (USPN 2006/0084417 A1) in view of Shi (USPN 6807163), in view over Nguyen (USPN 20030212784), and in further view over Hartless et al. (USPN 6292660)

47.   As per claim 48, Hartless et al. teaches the computing system of claim 1, wherein the scanning engine ([Figure 3-element 14] e.g., Melpignano et al. also teaches a scanning engine, which may be modified to include the functionality of element 14, as per Hartless) is configured to detect a network interface to be scanned is sending traffic ([Col 4 lines 4-8], [Col 5 lines15- 20] e.g., traffic, i.e., signals, are used to determine motion of the mobile device. It is determined that the mobile is sending traffic, i.e., in communication with a site, via analyzing signals. A low fade rate would imply that the mobile is not moving but determined to be in communication with a site. When it is determined that the mobile is not moving, it is therefore not necessary to scan at a particular interval because the mobile is determined to be in communication with a site and not moving between sites), the scanning engine analyzes statistics (e.g., a statistic is interpreted as a collection of quantitative data, i.e., signal, frequency, velocity, etc) for the traffic (e.g.,

signals are processed by equation (1) to provide motion estimate) to determine whether a

scanning period is to be skipped ([Col 5 lines 4-5] e.g. site scanning is not needed)

Therefore, at the time the invention was made, it would have been obvious to determine

that that mobile phone is in communication with a site and not moving to determine whether to

skip scanning period, i.e., skipping a scan interval.   Traffic is analyzed (e.g., analyzing signals,

which are measured. This measurement(e.g., signal) along with the determined frequency

provide a collection of quantitative data (e.g., frequency, signal strength, velocity, , i.e., statistics,

which are used in determining motion). Alternatively, as per Table 1, multiple scan periods are

depicted. One period may be skipped in lieu of another based on the aforementioned analysis.

48.   Claim 49 is rejected under 35 U.S.C. 103(a) as being unpatentable over Melpignano et

al. (USPN 2006/0084417 A1) in view of Shi (USPN 6807163), and in view over Nguyen (USPN

20030212784), and in view over Hawkins (USPN 7025209), and in further view over

Lemilainen et al. (USPN 6681259)

49.   As per claim 49, Melpignano et al. teaches the computer-readable medium of claim 28,

further comprising:

   receiving a notification that a new network interface is available ([0070-72] e.g., hardware

update. It is obvious that interfaces may be added and removed); and

   However, Melpignano et al. does not teach loading another media specific module (e.g.

network class information. It is obvious to have one class per network interface, providing a

plurality of classes. One class corresponds to Bluetooth (e.g., type, status), another class

corresponds to Wlan (e.g. type, status). Each class equates to a module.   When a new interface

is added, a new module is created, as per Hawkins, see below) corresponding to said new

network interface,. Hawkins teaches installing a network interface module, i.e., loading a media

specific module, which would correspond to the new interface hardware, such as Bluetooth,

where such modules contain code (e.g., drivers) configured to provide network information

([Col 101 lines 6-14])

However, Melpignano et al., as modified (e.g., one class per interface type, where a class is a

module), does not teach said media specific module (e.g., networkclass) configured to request

network interface information from a driver for said network interface.   Lemilainen et al.

teaches NIC drivers provide features and state information ([Col 10 lines 11-30] e.g., this

illustrates that drivers provide status information)

Therefore, at the time the invention was made, one of ordinary skill in the art would have

motivation to enable the networkinterface class (e.g., module) to request status information using

network interface drivers.   Melpignano et al teaches that interface status is requested - element

202 (ifStatusFlags). Lemilainen et al. teaches NIC drivers provide status information.

Therefore, it would have been obvious to use NIC drivers to relay state information to the

networkinterface module -element 202. As modified, there is a network interface module

(element 202) for each type of module (e.g., Bluetooth, GPRS, WLan). As new interface cards

are added, a new module, as per Hawkins, is added to reflect this addition.

Conclusion

50.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to DARRIN DUNN whose telephone number is (571)270-1645. The examiner can normally be reached on EST:M-R(8:00-5:00) 9/5/4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert DeCady can be reached on (571) 272-3819. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/DD/   /Albert DeCady/
08/11/09   Supervisory Patent Examiner
                                                   Art Unit 2121